IDEM **Guidance**
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Treatment of Hazardous Waste On-Site by Generators

The Indiana hazardous waste rules allow generators to accumulate hazardous waste on-site for 90 days or less (large quantity generators), or 180 days or less (small quantity generators), without a permit or having interim status[1]. This allowance is contingent upon placing the waste in:

(1) *containers* which are managed in accordance with the specific requirements enumerated in 40 CFR 265, Subpart I (Use and Management of Containers);
(2) *tanks* which are managed in accordance with 40 CFR 265, Subpart J (Tank Systems);
(3) *containment buildings* which are managed in accordance with 40 CFR 265, Subpart DD (Containment Buildings); and
(4) *drip pads*, used to collect treated wood drippage only, which are managed in compliance with 40 CFR 265, Subpart W (Drip Pads).

Exclusion from the requirement to obtain a RCRA permit is reiterated in 40 CFR 270.1(c)(2) for *generators*, as cited above, and for certain other specific instances, including:

(1) *elementary neutralization units* — used for neutralizing wastes that are hazardous only because they exhibit the characteristic of corrosivity (40 CFR 261.22) or are a listed waste (40 CFR 261, Subpart D) only because of corrosivity, and the unit meets the definition of tank, tank system, container, transport vehicle, or vessel (see definitions in 40 CFR 260.10);
(2) *wastewater treatments units* — units meeting the definition of tank or tank system (40 CFR 260.10) which are a part of a wastewater treatment system subject to regulation under either Section 402 or 307(b) of the Clean Water Act, and that receive and treat wastewater that is a hazardous waste, or that generate, accumulate, treat, or store wastewater treatment sludge which is a hazardous waste; and
(3) *totally enclosed treatment units* as defined in 40 CFR 260.10.

Generator Treatment On-Site in Containers, Tanks, or Containment Buildings

1 Standards Applicable to Generators of Hazardous Waste, Pre-Transport Requirements (Subpart C), Code of Federal Regulations 40 CFR 262.34, adopted by reference in the Indiana Administrative Code at 329 IAC 3.1-7-1.

The rules do not specify management standards for practices involving *treating* hazardous wastes that are distinct or different from the management standards for *storage* that are referenced in the accumulation allowance of 40 CFR 262.34, except for incineration (40 CFR 265, Subpart O) and thermal treatment (40 CFR 265, Subpart P). Hence, the Environmental Protection Agency has indicated, in preambles to the Federal hazardous waste rules,[2] and in numerous interpretive statements,[3] that the rules do not prohibit on-site generator treatment of hazardous waste in containers, tanks, or containment buildings, without a RCRA permit, so long as all applicable generator requirements, including storage management standards, are observed.

Treatment, in this sense, is defined in 40 CFR 260.10 as " ... any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume." Note, however, that a *recycling process* where a material is reclaimed to recover a usable product, or is regenerated, such as regeneration of spent solvents by distillation, is exempt from RCRA regulation (40 CFR 261.6(c)(1)), and thus does not require a permit.

The Indiana Department of Environmental Management (IDEM) concurs that generators may treat hazardous waste in containers, tanks, and containment buildings, without obtaining a RCRA hazardous waste treatment permit, so long as the generator complies with applicable generator requirements and storage management standards, including 40 CFR 262.34, referencing 40 CFR 264 and 265.

It should be noted that certain practices are either not permissible treatment, or are modes of treatment that are subject to RCRA permitting and adherence to specified management standards. Practices that are <u>not</u> permissible generator treatment include dilution of hazardous waste (prohibited under 40 CFR 268.3), and evaporation (either passive or heat-applied). Since management standards for incinerators and thermal treatment units have been established in the hazardous waste rules, these activities <u>do</u> require a permit and may not be conducted under the generator storage provision. Examples of such permit-required treatment might be a thermal desorber utilized to treat remediation waste, or heating hazardous waste to evaporate for volume reduction or to drive off volatile constituents (thermal treatment).

Employment of mobile waste treatment units may be permissible without a RCRA permit so long as the treatment is performed at the site of waste generation, is conducted in apparatus that meets the regulatory definition of tanks or containers, and complies with all applicable management standards as summarized below.

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2 Federal Registers 46 FR 2806, January 12, 1981, and 51 FR 10168, March 24, 1986.

3 RCRA Permit Policy Compendium documents 9453.1986(04); 9453.1987(03); 9453.1987(08); 9471.1987(02); 9453.1991(02); and 9451.1992(01).

Management Requirements for On-Site Hazardous Waste Treatment

Both general requirements, and management standards specific to mode of hazardous waste containment, apply under the generator accumulation allowance of 40 CFR 262.34, and hence also to the activity of on-site generator treatment. The primary requirements are summarized below.

General Requirements for Accumulation / Treatment

- Each container or tank must be **labeled or marked** clearly with the words "HazardousWaste";
- The **date** upon which each period of accumulation begins must be clearly marked andvisible for inspection on each container — **NOTE**: since generator treatment is allowable under the *storage provisions* of the rules, treatment must be accomplished within, and storage from the time of initial waste generation must not exceed, 90 days for large quantity generators or 180 days for small quantity generators. Note also that if treatment is performed in satellite accumulation containers, all requirements applying to satellite accumulation management must be complied with (40 CFR 262.34(c)(1) — for further information see IDEM guidance document "Satellite Accumulation of Hazardous Waste by Generators");
- The facility operator must comply with all requirements for **Preparedness and Prevention**,
  40 CFR 265, Subpart C. This includes providing and maintaining emergency response and waste release cleanup equipment, maintaining adequate aisle space, providing communications or alarm systems, and making emergency arrangements with local authorities;
- The facility operator must comply with all requirements for **Contingency Plan and Emergency Procedures**, 40 CFR 265, Subpart D. This includes development and implementation of a contingency plan and emergency procedures for responding to fires, explosions, or unplanned waste releases, and designating an emergency coordinator. More limited requirements apply to Small Quantity Generators as specified in
  40 CFR 262.34(d);
- **Personnel training** for proper hazardous waste management procedures must be given, as designated in 40 CFR 265.16. More limited requirements apply to Small Quantity Generators as specified in 40 CFR 262.34(d);
- If the generator is treating the hazardous waste to meet applicable treatment standards forland disposal under 40 CFR 268, Subpart D (Treatment Standards), he must develop, follow, and keep on-site, a **waste analysis plan** which describes the procedures the generator will carry out to comply with the treatment standards, as indicated in 40 CFR 268.7(a)(5). Also, Part 268 Land Disposal Restrictions standards require that the generator issue and maintain in their files certain notifications and certifications relating to the treated waste and its disposal. In regard to wastes that exhibit a hazardous characteristic, if the generator intends that the treatment render it non-hazardous for disposal as a non-hazardous waste, it must be remembered that Land Disposal Restrictions standards may require treatment of other underlying hazardous constituents to specified levels (the so-called Universal Treatment Standards listed in 40 CFR 268.48) <u>in addition to</u> achieving treatment

sufficient to remove the hazardous characteristic(s). In accordance with 329 IAC 3.1-12-2-8 (replacing 40 CFR 268.9(d)), when such treated waste is disposed as non-hazardous, a notification must be sent to the commissioner of IDEM.

- Upon closure of the unit where storage or treatment has occurred, the generator must comply with the **closure performance standards** specified in 40 CFR 265.111 and requirements for disposal of decontamination of equipment, structures, and soils, specified in 40 CFR 265.114.

Storage and Treatment in Containers

The generator who treats hazardous waste in containers must comply with the management standards given in 40 CFR 265, Subpart I — Use and Management of Containers. These requirements include: (a) using containers which are in good condition and not leaking, and that are compatible with the waste stored and treated therein; (b) keeping the container closed except when adding or removing waste, and handling the container in such a way that rupture or leakage is prevented; (c) inspecting the container storage area at least weekly for signs of leakage or deterioration; (d) locating containers holding ignitable or reactive waste at least 50 feet from the facility's property line (applies to Large Quantity Generator only); and (e) managing wastes which may be subject to air emission standards in accordance with 40 CFR 265, Subpart AA (Standards for Process Vents), Subpart BB (Standards for Equipment Leaks), and Subpart CC (Standards for Tanks, Surface Impoundments, and Containers) (applies to Large Quantity Generator only).

An example of hazardous waste treatment in containers is a practice common in the fiberglass industry: polymerization by reacting together small quantities of waste polyester/styrene monomers and MEK (methyl ethyl ketone), which are high-TOC ignitable hazardous wastes, to create solid fiberglass scrap that lacks hazardous characteristics and may be disposed of as a solid waste rather than a hazardous waste. (Such a process may achieve the treatment technology standard for polymerization, treatment code POLYM.) The containers in which the wastes are stored prior to reaction/treatment, as well as the vessel in which the reaction/treatment is performed, must be managed in accordance with the hazardous waste container management requirements as outlined above. Since this particular example involves an exothermic reaction that results in the release of heat and vapors, compliance with requirements relating to closed containers and air emissions (Subpart CC) may be of particular concern. Further information on these specific issues may be found in IDEM Nonrule Policy Document "Regulatory Analysis: 'Closed' Containers" and IDEM Information document "Subpart CC Air Emission Standards."

Storage and Treatment in Tanks

The Large Quantity Generator who treats hazardous waste in tanks must comply with the management standards given in 40 CFR 265, Subpart J — Tank Systems. These requirements include: (a) providing tank integrity assessments or adequate secondary containment for existing tank systems; (b) meeting specified standards for design and installation of new tanks and required ancillary equipment; (c) providing secondary containment and provisions for detection of waste releases as applicable and specified in 40 CFR 265.193; (d) inspecting the

tanks and related equipment at least daily, and maintaining them so as to prevent waste releases, or respond appropriately if a release occurs; (e) special requirements for ignitable, reactive, and incompatible wastes; and (f) managing wastes which may be subject to air emission standards in accordance with 40 CFR 265, Subparts AA, BB, and CC.

The Small Quantity Generator who treats hazardous waste in tanks must comply with the more limited requirements specified in 40 CFR 265.201.

Further information on the regulatory distinctions between tanks and containers may be found in IDEM guidance document "Clarification of 'tank' and 'container' definitions."

Storage and Treatment in Containment Buildings

The generator who treats hazardous waste in a containment building must comply with the management standards given in 40 CFR 265, Subpart DD — Containment Buildings. These requirements include: (a) adhering to specified design standards aimed at ensuring adequate structural integrity, compatibility with wastes or treatment reagents managed therein, and protection from exposure of waste to the elements; (b) providing additional control measures and secondary containment if the wastes contain free liquids; (c) applying controls and practices to prevent waste release, including fugitive dust emissions, and tracking out of waste by personnel or equipment; and (d) obtaining certification by a qualified professional engineer that the containment building meets specified requirements, and following prescribed procedures for detection and correction of conditions that threaten or cause release of hazardous waste.

It is important that the generator give careful consideration to the processes and equipment configuration involved in any on-site treatment practice to determine whether or not it legitimately constitutes treatment in tanks, containers, or containment buildings, which is permissible under the storage allowance of the hazardous waste rules. Treatment that is not done in tanks, containers, or containment buildings, or is not subject to specific exemption in the rules, does require a hazardous waste permit.

If you need additional information, or have any questions or concerns, please contact the staff of the Industrial Waste Compliance Branch, Office of Land Quality, at 317-308-3103. The IDEM toll-free telephone number is 1-800-451-6027.